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ATEX
INFORMATION



When good enough just isn't good enough

Weidmüller 



THE WEIDMÜLLER VALUES

HAZARDOUS AREA APPLICATION

Weidmüller have been leading suppliers of electrical connection technology to industry worldwide for over 50 years.

In this time we have developed a reputation for innovation, quality and reliability second to none, working closely with customers on application solutions across a truly international network of sales organisations.

Of course, we are always striving to find even better, more efficient ways to further connection technology and improve our service to customers.

We achieve this through concentrating on our four core values

Customers · Quality · Innovation · Employees

Customers

Quality

Innovation

Employees

As our new slogan states **“when good enough just isn’t good enough”**, we will never be satisfied with the bare minimum. **We aim to excel.**

And this is all areas of product and service, from signal conditioning modules to hazardous area enclosures, from power supplies to the cutting edge in insulation displacement technology for rail mounted terminals.



WE AIM TO EXCEL

Presence

We are represented in over sixty countries worldwide by wholly owned Weidmüller sales organisations and dedicated representatives.

This presence allows us to serve the requirements of the largest global corporations and projects whilst still managing customer relationships at a local level.

Increasing consumer and industrial demand for petrochemical products and the establishment of truly global players within the industry have led to increasing demands on process improvement.

Whether this be process optimisation of an ethylene plant or increased extraction rates within oil exploration, the needs are the same: reliability and efficiency – leading to a reduction of waste material, an increase in capacity utilisation and a safer operation. What these industries can never escape from, however, is the fact that the processing of chemicals, oil and gas is an inherently dangerous activity.

Weidmüller treat this with utmost respect.

ATEX 100a

ATEX 100a

Within the European Union this currently means products designed and manufactured to the European standards for Electrical Apparatus for Potentially Explosive Atmospheres, or the new ATEX directive, already in use since 1996 and mandatory throughout EU countries from 1st July 2003.



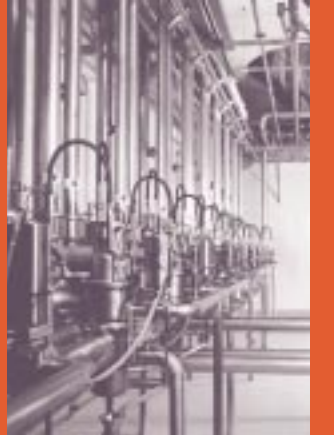
When good enough just isn't good enough

HAZARDOUS AREAS



94/9/EC - ATEX 100a

MAIN ISSUES AND TIMESCALES



ATEX 100a

The present European Council Directive 76/117/EEC becomes invalid as of 1st July 2003. After this, ATEX 100a (ATEX: Atmosphère Explosive = explosive atmospheres), belonging to the so-called 'New Approach' Directives, becomes mandatory.

Validity extends to all European Union countries plus Iceland, Liechtenstein and Norway. It relates to the selling and bringing into service of products in these countries, designed for use in areas subject to explosive atmospheres caused by gases, steam, vapour and dust. It is also valid for the mining industry.

ATEX has been valid since March 1996 and is currently optional, running in parallel with the existing regulations until 30th June 2003 (transitional period). After this date all new plant and equipment for installation in Hazardous Areas must comply with, and be certified to the ATEX regulations.

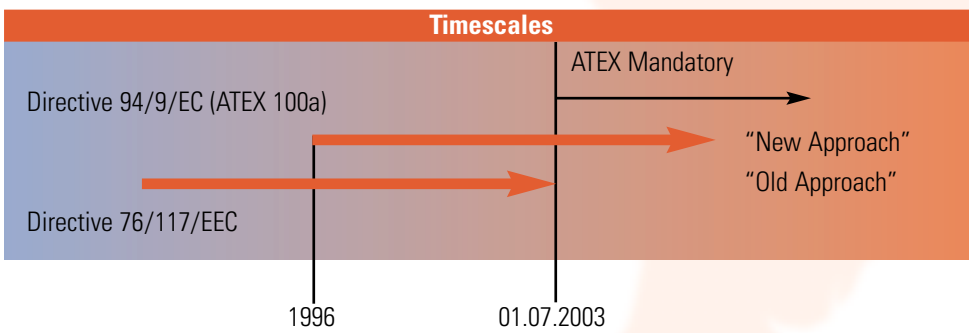
Previous Zone definitions (Zones 0, 1 and 2) and Protection Methods (e.g. 'i': intrinsic safety, 'e': increased safety) still apply.



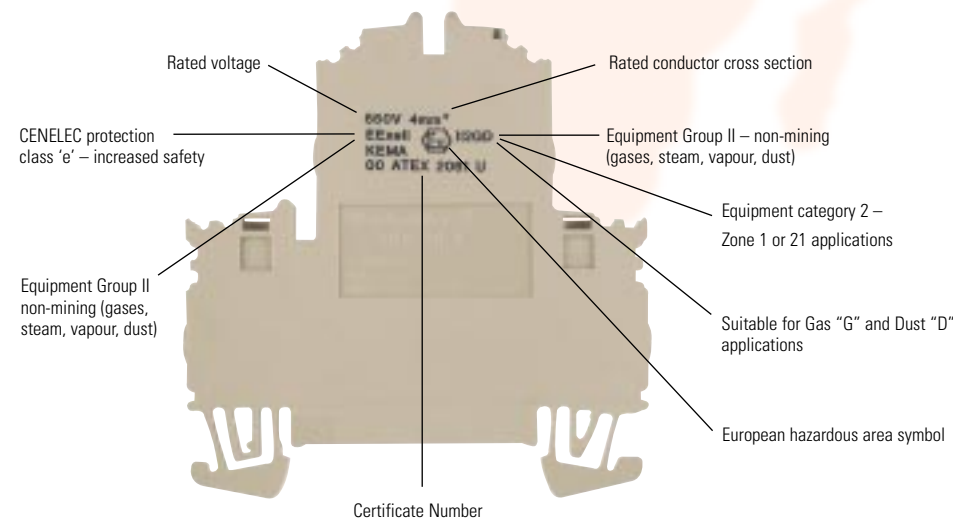
| Protection Type | Code | Protection Class | | Equipm. Category (non-mining) |
|----------------------|------|------------------|----------|-------------------------------|
| | | CENELEC EN | IEC | |
| General Requirements | – | 50014 | 60079-0 | – |
| Oil Immersion | o | 50015 | 60079-6 | 2 |
| Pressurised | p | 50016 | 60079-2 | 2 |
| Powder Filled | q | 50017 | 60079-5 | 2 |
| Flameproof Enclosure | d | 50018 | 60079-1 | 2 |
| Increased Safety | e | 50019 | 60079-7 | 2 |
| Intrinsic Safety | ia | 50020 | 60079-11 | 1 |
| Intrinsic Safety | ib | 50020 | 60079-11 | 2 |
| Type 'n' | n | 50021 | 60079-15 | 3 |
| Encapsulated | m | 50028 | 60079-18 | 2 |

| Gas (eg) | Gas Groups | |
|------------------|------------|---------------|
| | CENELEC | NEC 500 |
| Propane | IIA | D |
| Ethylene | IIB | C |
| Hydrogen | IIC | B |
| Acetylene | IIC | A |
| Methane (mining) | I | Mining (MSHA) |

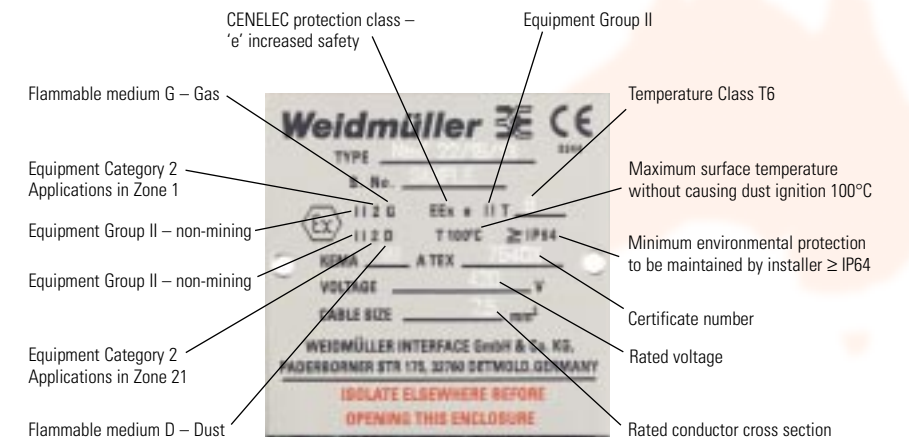
| Max Surface Temperature (°C) | Temperature Classes | |
|------------------------------|---------------------|-----------|
| | CENELEC | NEC 500-3 |
| 450 | T1 | T1 |
| 300 | T2 | T2 |
| 280 | – | T2A |
| 260 | – | T2B |
| 230 | – | T2C |
| 215 | – | T2D |
| 200 | T3 | T3 |
| 180 | – | T3A |
| 165 | – | T3B |
| 160 | – | T3C |
| 135 | T4 | T4 |
| 120 | – | T4A |
| 100 | T5 | T5 |
| 85 | T6 | T6 |



Marking Example – Rail Mounted Terminal WDK 4N V



Marking Example: Increased Safety Enclosure Assembly



| Hazardous Area Classification | | | | |
|------------------------------------|---|--------------------|---------------------------|------------------|
| CENELEC Classification IEC60079-10 | Existence of potentially explosive atmosphere | Equipment category | US Classification NEC 500 | Flammable Medium |
| Zone 0 | Continuously, for long periods or often | 1G | Class I, Div 1 | Gases, Vapours |
| Zone 20 | | 1D | Class II, Div 1 | Dust |
| Zone 1 | Occasionally | 2G | Class I, Div 1 | Gases, Vapours |
| Zone 21 | | 2D | Class II, Div 1 | Dust |
| Zone 2 | Rarely and for short periods | 3G | Class I, Div 2 | Gases, Vapours |
| Zone 22 | | 3D | Class II, Div 2 | Dust |

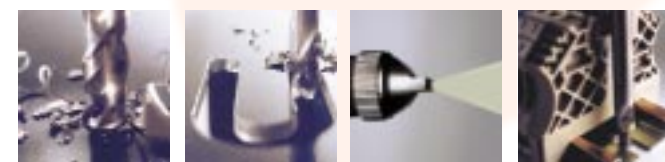


WEIDMÜLLER PRODUCTS AND SERVICES

CONTROL AND MONITORING REQUIREMENT

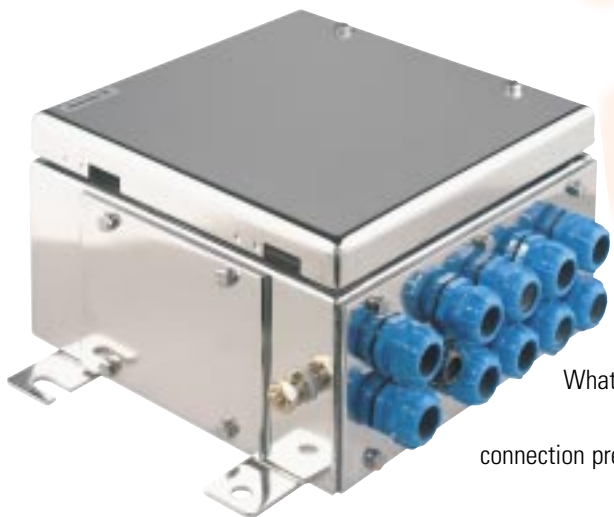


Weidmüller offers the most comprehensive range of ATEX certified enclosures, rail mounted terminals and accessories. With our complete custom service, approved for the manufacture of ATEX assemblies,



we will mill, drill, paint and assemble enclosures to your specification.

Or if you only want an empty enclosure, then we can do that.



Whatever your connection preference,

Weidmüller can support your every need

with screw connection in the classic SAK- and extensive W-series, tension-clamp in the Z-series and for the fastest connection of all, insulation displacement (IDC) technology in the I-series – all, of course, available with ATEX certification.

Weidmüller's standard Ex-range of enclosures and terminals are designed and certified for use in Zone 0 (intrinsic safety 'ia'), Zone 1 (increased safety, 'e') and Zone 2 (protection class 'n') environments.



If you have further specialist needs or don't find the solution you're looking for, then contact us. We will do our utmost to meet your requirements.



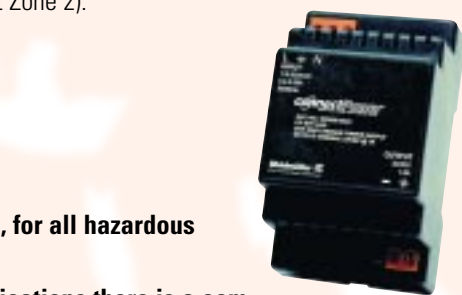
Furthermore, in Zone 0 (intrinsic safety 'ia') applications fieldbus connector units, pre-assembled cabling and accessories are designed with ease of use and overall plant reliability foremost.

The latest versions of this family are designed to be secure in EMC environments and, since Autumn 2001, are all certified to ATEX.



Following demand from the North American market, we have certified a range of power supplies to Class I, Division 2 requirements (equivalent Zone 2).

Of course, for all hazardous area applications there is a complementary safe area control and monitoring requirement.



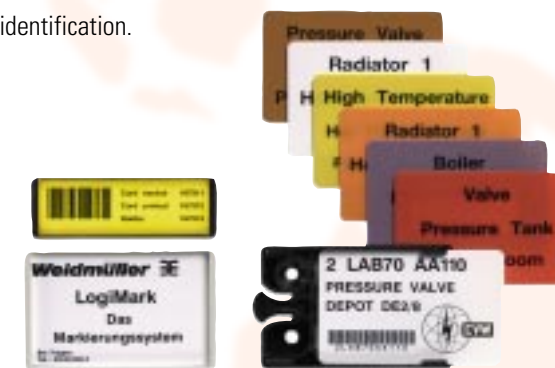
Signal conditioning, over-voltage protection (also available for intrinsically safe circuits), relay and opto-coupler isolation, rail mounted terminals and a host of accessories certified to international standards.



Completing the installation don't forget Weidmüller's extensive range of: **Tools for cutting, stripping, crimping and fastening.**



And Markers and marker systems for permanent and reliable plant and cable identification.



Argentina
Australia
Austria
Bahrain
Belarus
Belgium
Brazil
Bulgaria
Canada
Chile
China
Colombia
Croatia
Czech Republic
Denmark
Estonia
Finland
France
Germany
Great Britain
Greece
Hong Kong
Hungary
India
Indonesia
Iran
Ireland
Israel
Italy
Japan
Korea
Luxembourg
Malaysia
Mexico

Morocco
Netherlands
New Zealand
Norway
Pakistan
Peru
Philippines
Poland
Portugal
Romania
Russia
Saudi-Arabia
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South Africa
Spain
Sweden
Switzerland
Taiwan
Thailand
Turkey
Ukraine
USA
Vietnam
Yugoslavia



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Weidmüller is the leading manufacturer of components for electrical connection technology.

We develop, produce and sell a wide spectrum of products from terminal blocks through connectors to relay sockets and I/O sockets for every type of application.



Order number:

5628200000/11/2001/BKD/Me.